Overcurrent and short-circuit protection of power and lighting feeders and branch circuits

Current Limiting

Fuses which meet the requirements for current limiting fuses are required to be labeled “Current Limiting”. Fuse labels must include: UL/CSA fuse class, manufacturer’s name or trademark, current rating, AC and/or DC voltage rating, and AC and/or DC interrupting rating. “Time Delay”, “D”, “TD” or equivalent may also be included on the label when the fuse complies with the time delay requirements of its class.
Overcurrent and short-circuit protection of power and lighting feeders and branch circuits

**FUSES FOR SUPPLEMENTARY OVERCURRENT PROTECTION**

**STANDARDS:** UL Standard 248-14; CSA Standard C22.2, No. 59-1. Three Classifications covered:

**NOTE:** Fuses may be rated for AC and/or DC when suitable for such use.

- **(1) MICRO FUSES**
  - Voltage ratings: UL, 125 volts; CSA, 0-250 volts
  - Current ratings: UL, 0-10 amps; CSA, 0-60 amps
  - Interrupting rating: 50 amps rms symmetrical

- **(2) MINIATURE FUSES** (CSA classifies these as Supplemental Fuses)
  - Voltage ratings: UL, 125 or 250 volts; CSA, 0-600 volts
  - Current ratings: UL, 0-30 amps; CSA, 0-60 amps
  - Interrupting rating: 10,000 amps rms symmetrical

- **(3) MISCELLANEOUS CARTRIDGE FUSES** (CSA classifies these as Supplemental Fuses)
  - Voltage ratings: UL, 125-1000 volts; CSA, 0-100 volts
  - Current ratings: UL, 0-30 amps; CSA 0-60 amps
  - Interrupting ratings: 10,000, 50,000, or 100,000 amps rms symmetrical

**TIME DELAY (Optional):** Minimum delay at 200% fuse rating: 5 seconds for fuses rated 3 amps or less; 12 seconds for fuses rated more than 3 amps.

**INTERRUPTING RATINGS:**

- UL: 10,000, 50,000, or 100,000 amps rms symmetrical
- CSA: 10,000 amps rms symmetrical

**AMPERE RATINGS:**

- UL: 0-30 amps
- CSA: 0-60 amps

**VOLTAGE RATINGS:**

- UL: 125 volts
- CSA: 0-250 volts

**STANDARDS:**

- UL Standard 248-6
- CSA Standard C22.2, No. 59-1
- UL Standard 248-11

**NOTE:** Littelfuse electronic fuses are also covered by these standards; see electronic section of this catalog, or littelfuse.com for complete listing.

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**SPECIAL PURPOSE FUSES**

There are no UL Standards covering this category of fuses. These fuses have special characteristics designed to protect special types of electrical or electronic equipment such as diodes, SCR, transistors, thyristors, capacitors, integrally fused circuit breakers, parallel cable runs, etc.

Fuses may be UL Recognized for use as a component in UL Listed equipment. UL Recognized fuses are tested for characteristics such as published interrupting capacity. They are also covered by UL re-examination service.

Non-renewable

**VOLTAGE RATINGS:** up to 1000 volts AC and/or DC

**AMPERE RATINGS:** up to 6000 amperes

**INTERRUPTING RATINGS:** up to 200,000 amperes

Many of these fuses are extremely current limiting. When considering application of these fuses, or if you have special requirements, contact Littelfuse Technical Support Group for assistance.

**LF SERIES:** KLC, L15S, L25S, L50QS, L50S, L60S, L70QS, L70S, JLLS 900 amp through 1200 amp

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**Non-Current-Limiting**

**CLASS H**

- UL Standard 248-6
- CSA Standard C22.2, No. 59-1
- Also known as NEMA Class H, and sometimes referred to as “NEC” or “Code” fuses

- Voltage ratings: 250 and 600 volts, AC
- Current ratings: 0-600 amps
- Interrupting ratings: 10,000 amps rms symmetrical

**STANDARDS:**

- UL Standard 248-14
- CSA Standard C22.2, No. 59-1

**NOTE:** Littelfuse electronic fuses are also covered by these standards; see electronic section of this catalog, or littelfuse.com for complete listing.

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**ONE-TIME FUSES (NON-RENEWABLE)**

- Time delay: Optional
- Time-delay fuses must hold 500% current rating for a minimum of ten seconds.

**LF SERIES:** NLKP

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**RENEWABLE FUSES**

- Only Class H fuses may be renewable.
- Some fuses have a moderate amount of time delay, referred to as “time lag” to differentiate from true time delay.

**LF SERIES:** Discontinued - Please cross to RK5 or RK1 class fuses

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**PLUG FUSES**

- UL Standard 248-11
- CSA Standard C22.2, No. 59-1

**VOLTAGE RATINGS:** 125 volts AC only

**AMPERE RATINGS:** 0-30 amps

**INTERRUPTING RATINGS:** 10,000 amps rms symmetrical. Interrupting rating need not be marked on fuse.

**EDISON-BASE:** Base is same as standard light bulb. All amp ratings interchangeable with UL Classes K1 & K5.

**TYPE S:** Not interchangeable with Edison-base fuses unless non-removable Type S fuse adapter is installed in Edison-base fuse socket. To prevent overheating, use Type S adapters have three ampere ratings: 10-15, 16-20, and 21-30 amps.

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**ADDITIONAL RESOURCES AND POWR-GARD® PRODUCTS**

Littelfuse is continually developing new technical resources and products that meeting evolving industry standards. For the latest information, visit: littelfuse.com